

What is claimed is:

[Claim 1] 1. A method, comprising:

providing a substrate;
forming an electrically conductive layer on a top surface of said substrate;
patterning said conductive layer into a plurality of wire bond pads spaced apart; and
forming a dielectric layer on said top surface of said substrate in spaces between adjacent wire bond pads, top surfaces of said dielectric layer in said spaces coplanar with coplanar top surfaces of said wire bond pads.

[Claim 2] 2. The method of claim 1, further including:

recessing said dielectric layer in said spaces below said top surfaces of said wire bond pads.

[Claim 3] 3. The method of claim 1, further including:

recessing said wire bond pads below said top surfaces of said dielectric layer in said spaces.

[Claim 4] 4. The method of claim 1, further including:

forming a final dielectric layer on said substrate, said dielectric layer and said wire bond pads; and
forming openings in said final dielectric layer to expose less than an entire portion of each said wire bond pad in said openings.

[Claim 5] 5. The method of claim 4, wherein said final dielectric layer comprises a material selected from the group consisting of polyimide and photo-sensitive polyimide.

[Claim 6] 6. The method of claim 1, wherein said dielectric layer comprises a layer of silicon oxide, a layer of silicon nitride or combinations thereof.

[Claim 7] 7. The method of claim 1, wherein said wire bond pads comprise aluminum, aluminum copper alloy, copper, gold, tantalum, tantalum nitride or combinations thereof.

[Claim 8] 8. A method, comprising:

- (a) providing a substrate;
- (b) forming a passivation layer on a top surface of said substrate;
- (c) forming an electrically conductive layer on a top surface of said passivation layer;
- (d) patterning said conductive layer into a plurality of wire bond pads spaced apart, top surfaces of said wire bond pads coplanar; and
- (e) forming a dielectric layer on said top surface of said passivation layer in spaces between adjacent wire bond pads and on said top surfaces of said wire bond pads, said dielectric layer filling said spaces; and
- (f) removing said dielectric layer from said top surface of said wire bond pads, said top surface of said dielectric layer in said spaces coplanar with said top surfaces of said wire bond pads.

[Claim 9] 9. The method of claim 8, further including:

recessing said dielectric layer in said spaces below said top surface of said wire bond pads.

[Claim 10] 10. The method of claim 8, further including:

recessing said wire bond pads below said top surface of said dielectric layer.

[Claim 11] 11. The method of claim 10, further including:

forming a final dielectric layer on said substrate; and
forming openings in said final dielectric layer to expose less than an entire portion of each said wire bond pad in said openings.

[Claim 12] 12. The method of claim 11, wherein said final dielectric layer comprises a material selected from the group consisting of polyimide and photo-sensitive polyimide.

[Claim 13] 13. The method of claim 8, further including:

forming a final dielectric layer on said substrate; and
forming openings in said final dielectric layer to expose less than an entire portion of each said wire bond pad in said openings.

[Claim 14] 14. The method of claim 13, wherein said final dielectric layer comprises a material selected from the group consisting of polyimide and photo-sensitive polyimide.

[Claim 15] 15. The method of claim 8, wherein said dielectric layer comprises a layer of silicon oxide, a layer of silicon nitride or combinations thereof.

[Claim 16] 16. The method of claim 8, wherein said wire bond pads comprise aluminum, aluminum copper alloy, copper, gold, tantalum, tantalum nitride or combinations thereof.

[Claim 17] 17. The method of claim 8:

further including between steps (b) and (c), forming via openings in said passivation layer exposing regions of electrically conductive wires in said substrate;

wherein step (d) fills said via openings with said electrically conductive layer; and

wherein step (d) includes forming each wire bond pad over at least one said via opening.

[Claim 18] 18. A structure, comprising:

a substrate;

a plurality of wire bond pads on a top surface of said substrate, said wire bond pads spaced apart; and

a dielectric layer on said top surface of said substrate in spaces between adjacent wire bond pads, top surfaces of said dielectric layer in said spaces about coplanar with coplanar top surfaces of said wire bond pads.

[Claim 19] 19. The structure of claim 18, further including:

a final dielectric layer on said substrate, said dielectric layer and said wire bond pads; and

openings in said final dielectric layer exposing less than an entire portion of each said wire bond pads in said openings.

[Claim 20] 20. The structure of claim 19, wherein said final dielectric layer comprises a material selected from the group consisting of polyimide and photo-sensitive polyimide.

[Claim 21] 21. The structure of claim 18, wherein said dielectric layer comprises a layer of silicon oxide, a layer of silicon nitride or combinations thereof.

[Claim 22] 22. The structure of claim 18, wherein said wire bond pads comprise aluminum, aluminum copper alloy, copper, gold, tantalum, tantalum nitride or combinations thereof. 23. A structure, comprising:

- a substrate;

- a plurality of wire bond pads on a top surface of said substrate, said wire bond pads spaced apart; and

- a dielectric layer on said top surface of said substrate in spaces between adjacent wire bond pads, top surfaces of said wire bond pads recessed below top surfaces of said dielectric layer in said spaces.

[Claim 23] 24. The structure of claim 23, further including:

- an final dielectric layer on said substrate, said dielectric layer and said wire bond pads; and

- openings in said final dielectric layer exposing less than an entire portion of each said wire bond pad in said openings.

[Claim 24] 25. The structure of claim 24, wherein said final dielectric layer comprises a material selected from the group consisting of polyimide and photo-sensitive polyimide.

[Claim 25] 26. The structure of claim 24, wherein at least one of said openings extends across two or more adjacent wire bond pads.

[Claim 26] 27. The structure of claim 23, wherein said dielectric layer comprises a layer of silicon oxide, a layer of silicon nitride or combinations thereof.

[Claim 27] 28. The structure of claim 23, wherein said wire bond pads comprise aluminum, aluminum copper alloy, copper, gold, tantalum, tantalum nitride or combinations thereof.